#### REMARKS

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed October 5, 2004.

#### **Drawings**

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5), because they do not include reference numbers included in paragraph 0004 of the description. An amended specification is accordingly filed herewith to remove the reference numbers 101, 105, 110, 115, and 120, from the specification. These reference numbers were originally included in the specification by mistake and their removal should not be construed as adding new matter or hindering enablement of the specification in any way. Indeed, the features referred to by the reference numbers are adequately labeled without the use of reference numbers. In addition, the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5), because they do not include reference number 505 included in paragraph 0024 of the description. Replacement drawings are therefore filed herewith that include reference number 505. Accordingly, it is respectfully submitted by Applicant that the drawings are presently in condition for allowance.

# Claim Objections

Claims 4, 13, and 26 are objected to for various informalities. Claims 4, 13, and 26 have been amended to reflect the suggested changes mentioned in the Office Action. Accordingly, Applicant respectfully submits that the objections to claims 4, 13, and 26 have been overcome.

### **Double Patenting**

Claims 1-30 are provisionally rejected under 35 USC §101 as claiming the same invention as claims 1-30 of copending Application No. 10/425,279. Applicant respectfully submits that the double patenting rejection has been overcome in view of the claim amendments included in this response. Accordingly, Applicant respectfully submits that the double patenting rejection of claims 1-30 has been overcome.

## 35 U.S.C. 102 Rejections

Claims 1-4, 8, 16, 17, 24, 25 and 27-29 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,137,939 (hereafter "Henry"). Particularly, the Office Action alleges that Henry teaches each limitation of independent claims 1, 8, 16, and 24. Claims 1, 8, 16, and 24 have been amended to more clearly articulate various aspects of at least one embodiment of the invention. Specifically, independent claims 1, 8, 16, and 24 are presently amended to reflect that the effective refractive index of the wave guide is dependent upon a portion of the area of one side of one of the materials (e.g., the polymer material) that is existing within and is coplanar with a cross section of only a portion of the optical mode surrounding the core of the wave guide.

Henry, on the hand, teaches an elastomeric material that has replaced a portion of the wave guide core (col. 6, lns. 55-57, Figure 1b) and an effective refraction index that is dependent upon the length of the elastomeric material section that replaced the corresponding wave guide core section (col. 7, lns. 30-40, Figure 1b). Therefore, Henry does not anticipate presently amended claims 1, 8, 16, and 24.

Accordingly, Applicant respectfully submits that claims 1, 8, 16, and 24, as well as all dependent claims, are presently in condition for allowance.

35 U.S.C. 103 Rejections

Claims 5, 6, 2-15, 18-21 are rejected under 35 USC §103(a) as being unpatentable over

Henry. However, in view of the above amendments and discussion pertaining to claims 1, 8, 16,

and 24, from which claims 5, 6, 2-15, 18-21 depend, Applicant respectfully submits that the

rejection has been overcome.

Accordingly, it is respectfully asserted by Applicant that claims 5, 6, 2-15, 18-21 are in

condition for allowance.

Claims 7, 9-11 and 26 are rejected under 35 USC 103(a) as being unpatentable over

Henry in view of Deacon (U.S. patent 6,243,517). However, in view of the above amendments

and discussion pertaining to claims 1, 8, 16, and 24, from which claims 7, 9-11 and 26 depend,

Applicant respectfully submits that the rejection has been overcome.

Accordingly, it is respectfully asserted by Applicant that claims 7, 9-11 and 26 are in

condition for allowance.

If there are additional fees due, please charge them to our Deposit Account No. 02-2666.

Respectfully submitted,

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